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(57) [Abstract]
[Technical problem] Offer of the disposable body fluid processing supply which has a suitable opening to hold the excreted facilities.
[Means for Solution] The body fluid processing supply 1 which has the opening 8 surrounded by the cover sheet portion 7 above the body fluid absorption section 6 has the front end section 41, the back end section 42, and these both ends 41 and the pars intermedia 43 in which it is located among 42 in a longitudinal direction, and it is formed so that width of face may become the largest in pars intermedia 43.

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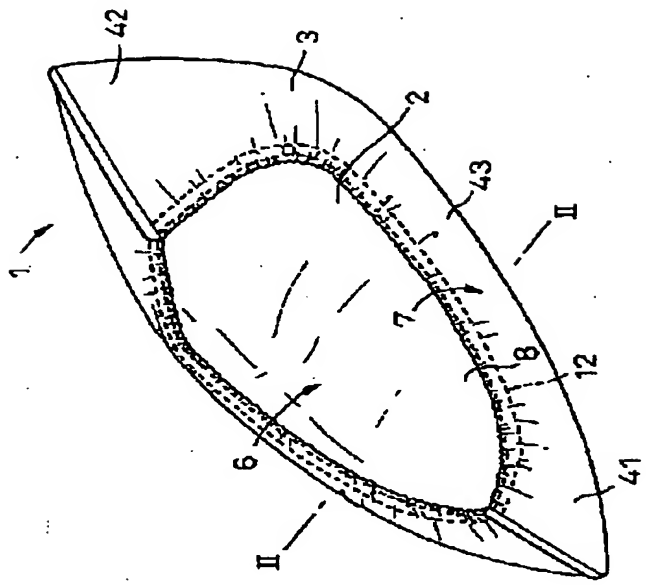

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CLAIMS

[Claim(s)]

[Claim 1] A liquid permeability inner surface sheet The body fluid absorption section is formed of a non-liquid permeability outside surface sheet and an absorptivity core which intervenes among both [these] sheets. It extends so that a cover sheet portion which makes at least one side of said inside-and-outside side sheet and one may cover an inner surface of this periphery portion from the upper part along with a periphery portion of said absorption section. A opening surrounded by said cover sheet portion is formed in the upper part for a center section of said absorption section, said cover sheet portion meets an edge of said opening, and it is elastic elasticity. It is said supply equipped with the above, and is characterized by for said absorption section having a cross direction and the cross direction which intersects

this direction, and forming in said cross direction the front end section, the back end section, and pars intermedia located among these both ends, and being formed so that width of face of said absorption section may become the largest in said pars intermedia.

[Claim 2] Said absorption section is a supply according to claim 1 currently formed from said forward back end section so that said width of face may become large gradually toward said pars intermedia.

[Claim 3] Said pars intermedia is a supply according to claim 1 or 2 with which said width of face is the largest by part from said back end section.

[Claim 4] A supply according to claim 1 with which said forward back end section is covered with said cover sheet portion.

[Claim 5] A supply according to claim 1 to 4 with said elastic member and cover sheet able to form a cross section of an about T character mold, when a band-like elastic member whose width of face is 5-50mm is attached in a edge of said opening, said cover sheet joins to a crosswise center section under [said] an elastic member in said pars intermedia and said supply is worn.

[Claim 6] A liquid permeability inner surface sheet characterized by providing the following, and a non-liquid permeability outside surface sheet, The body fluid absorption section is formed of an absorptivity core which intervenes among both [these] sheets. It extends so that a cover sheet portion which makes at least one side of said inside-and-outside side sheet and one may cover an inner surface of this periphery portion from the upper part along with a periphery portion of said absorption section. A manufacture method of a disposable body fluid processing supply that a opening surrounded by said cover sheet portion is formed in the upper part for a center section of said absorption section, and said cover sheet portion has elastic elasticity along an edge of said opening a. A process which covers said core with said inner surface sheet and outside sheet, joins said inside-and-outside side sheet in a portion which extends from a periphery of said core, and obtains a layered product b. A process which joins an elastic member to the edges-on-both-sides section which is concurrent on both sides of said core of one of said inside-and-outside side sheets in the shape of a straight line in the state of expanding c. A process which ****s said inner surface sheet inside and turns up said layered product so that the elastic members of said edges-on-both-sides section may overlap d. a process which joins said turned-up layered product along with two imaginary lines which intersect said edges-on-both-sides section, and are mutually concurrent on both sides of said core, and e. — a process which shrinks said elastic member after said process d

[Claim 7] A manufacture method according to claim 6 which said elastic member is the band-like thing which has width of face which is 5-50mm, and joins this member to said edges-on-both-sides section in a crosswise interstitial segment.

[Claim 8] A manufacture method according to claim 6 or 7 that a means for attaching said supply firmly to clothes includes a process formed in said outside

sheet.
[Claim 9] A liquid permeability inner surface sheet A non-liquid permeability outside surface sheet The body fluid absorption section is formed of an absorptivity core which intervenes among both [these] sheets. It extends so that a cover sheet portion which makes at least one side of said inside-and-outside side sheet and one may cover an inner surface of this periphery portion from the upper part along with a periphery portion of said absorption section. In a continuous manufacture method of a disposable body fluid processing supply that a opening surrounded by said cover sheet portion is formed in the upper part for a center section of said absorption section, and said cover sheet portion has elastic elasticity along an edge of said opening a. A process which supplies continuously each of the 2nd web for forming the 1st web and said outside sheet for forming said inner surface sheet to an one direction b. A process which supplies an elastic member to said one direction continuously, and is joined to the edges-on-both-sides section of one of said the 1st and 2 webs in the shape of a straight line in the state of expanding c. a process which supplies said core to a crosswise central region of one of said the 1st and 2 webs intermittently in said one direction, and d. — after supplying said elastic member and core, said core is covered in the shape of sandwiches — as — said the 1st and 2 web — superposition, these the 1st and 2 webs, an elastic member, and a core It is said manufacture method equipped with the above, and is characterized by including a process cut so that a part joined to each of both sides bordering on this imaginary line at said process f may remain selectively along with an imaginary line prolonged crosswise [of said 3rd web], and a process which shrinks said elastic member after the h. aforementioned process g.
[Claim 10] A manufacture method according to claim 9 which said elastic member is the band-like thing which has width of face which is 5-50mm, and joins this member to said edges-on-both-sides section in a crosswise interstitial segment.
[Claim 11] A manufacture method according to claim 9 or 10 that a means for attaching said supply firmly to clothes includes a process formed in said 2nd web.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[The technical field to which invention belongs] This invention relates to the manufacture method of a suitable disposable body fluid processing supply to use it combining a disposable diaper, disposable incontinentia trousers, etc.
[0002]
[Description of the Prior Art] The method of forming elastic opening in the skin reliance upper surface sheet of a disposable diaper is indicated by JP,5-293138,A. Besides with the field sheet, the elastic member describes the arc in the state of expanding along the edge of a opening. While pouring continuously the sheet for using it as an upper surface sheet, an arc can be made to draw on an elastic member on a continuous upper surface sheet by supplying making the elastic member which is in an expanding condition using a traverse means rock crosswise [of the sheet].
[0003]
[Problem(s) to be Solved by the Invention] By said well-known method of forming an elastic opening in an upper surface sheet, even if it can carry out high-speed supply of the sheet, there is a limit in high-speed operation of a traverse means, and the diaper quantity of production per unit time amount cannot be made not much high. Moreover, by adoption of a traverse means, plant-and-equipment investment increases and, as for the production line of a diaper, the manufacturing cost of a diaper rises.
[0004] The place which this invention makes a technical problem is to solve many problems of said conventional technology, as the body fluid processing supply of throwing away which has elastic opening like said diaper can be manufactured by the simple method.
[0005]
[Means for Solving the Problem] In this invention, said technical problem is solved by the 1st invention concerning a disposable body fluid processing supply, and the 1st manufacture method (henceforth the 2nd invention) and the 2nd manufacture method (henceforth the 3rd invention) concerning said supply.
[0006] Said 1st invention a premise A liquid permeability inner surface sheet and a non-liquid permeability outside surface sheet, The body fluid absorption section is formed of an absorptivity core which intervenes among both [these] sheets. It extends so that a cover sheet portion which makes at least one side of said inside-and-outside side sheet and one may cover an inner surface of this periphery portion from the upper part along with a periphery portion of said absorption section. A opening surrounded by said cover sheet portion is formed in the upper part for a center section of said absorption section, and said cover sheet portion is the

disposable body fluid processing supply which has elastic elasticity along an edge of said opening.

[0007] In this premise, a place by which said 1st invention is characterized is to be formed [for said absorption section to have a cross direction and the cross direction which intersects this direction, and to form in said cross direction the front end section, the back end section, and pars intermedia located among these both ends, and] so that width of face of said absorption section may become the largest in said pars intermedia.

[0008] There are the following embodiments in said 1st invention.

[0009] (1) From said forward back end section, said absorption section is formed so that said width of face may become large gradually toward said pars intermedia.

[0010] (2) In said pars intermedia, said width of face has become the largest by part from said back end section.

[0011] (3) Said forward back end section is covered with said cover sheet portion.

[0012] (4) When a band-like elastic member whose width of face is 5-50mm is attached in a edge of said opening, said cover sheet joins to a crosswise center section under [said] an elastic member in said pars intermedia and said supply is worn, said elastic member and cover sheet are able to form a cross section of an about T character mold.

[0013] The 2nd invention of said the 2nd and 3 invention a premise The body fluid absorption section is formed of a liquid permeability inner surface sheet, a non-liquid permeability outside surface sheet, and an absorptivity core that intervenes among both [these] sheets. It extends so that a cover sheet portion which makes at least one side of said inside-and-outside side sheet and one may cover an inner surface of this periphery portion from the upper part along with a periphery portion of said absorption section. A opening surrounded by said cover sheet portion is formed in the upper part for a center section of said absorption section, and said cover sheet portion is the manufacture method of a disposable body fluid processing supply of having elastic elasticity along an edge of said opening.

[0014] In this premise, a place by which said 2nd invention is characterized is to include the following process in said manufacture method.

[0015] a. A process which covers said core with said inner surface sheet and outside sheet, joins said inside-and-outside side sheet in a portion which extends from a periphery of said core, and obtains a layered product, b. So that the elastic members of the c. aforementioned edges-on-both-sides section may overlap a process which joins an elastic member to the edges-on-both-sides section which is concurrent on both sides of said core of one of said inside-and-outside side sheets in the shape of a straight line in the state of expanding A process which ****s said inner surface sheet inside and turns up said layered product, a process which joins said layered product d. Turned up along with two imaginary lines which intersect said edges-on-both-sides section, and are mutually concurrent on both sides of said core, and a process which shrinks said elastic member after the e. aforementioned

process d.
[0016] In a desirable embodiment of said 2nd invention, said elastic member is the band-like thing which has width of face which is 5-50mm, and joins this member to said edges-on-both-sides section in a crosswise interstitial segment. Moreover, said manufacture method can include a process by which a means for attaching said supply firmly to clothes is formed in said outside sheet.
[0017] Said 3rd invention a premise A liquid permeability inner surface sheet and a non-liquid permeability outside surface sheet, The body fluid absorption section is formed of an absorptivity core which intervenes among both [these] sheets. It extends so that a cover sheet portion which makes at least one side of said inside-and-outside side sheet and one may cover an inner surface of this periphery portion from the upper part along with a periphery portion of said absorption section. A opening surrounded by said cover sheet portion is formed in the upper part for a center section of said absorption section, and said cover sheet portion is the continuous manufacture method of a disposable body fluid processing supply of having elastic elasticity along an edge of said opening.
[0018] In this premise, a place by which said 3rd invention is characterized is to include the following process in said manufacture method.
[0019] a. A process which supplies continuously each of the 2nd web for forming the 1st web and said outside sheet for forming said inner surface sheet to an one direction, b. A process which supplies an elastic member to said one direction continuously, and is joined to the edges-on-both-sides section of one of said the 1st and 2 webs in the shape of a straight line in the state of expanding, c. A process which supplies said core to a crosswise central region of one of said the 1st and 2 webs intermittently to said one direction, d. A process which forms the 3rd web which consists said the 1st and 2 web of superposition, these the 1st and 2 webs, an elastic member, and a core so that said core may be covered in the shape of sandwiches after supplying said elastic member and core, e. Said 1st web is carried out inside so that the elastic members of said edges-on-both-sides section may overlap. f. With a process which turns up said 3rd web A process which joins said 1st web which contact mutually [said 3rd turned-up web] by part between said adjacent cores and cores, g. In between said cores and cores which adjoin each other in said 3rd web joined at said process f A process cut so that a part joined to each of both sides bordering on this imaginary line at said process f may remain selectively along with an imaginary line prolonged crosswise [of said 3rd web], and a process which shrinks said elastic member after the h. aforementioned process g.
[0020] In the desirable embodiment of said 3rd invention, said elastic member is the band-like thing which has width of face which is 5-50mm, and can join this member to said edges-on-both-sides section in a crosswise interstitial segment. Moreover, said manufacture method can include a process by which a means for attaching said supply firmly to clothes is formed in said 2nd web.
[0021]

[Embodiment of the Invention] It is as follows when the details of the manufacture method of the disposable body fluid processing supply concerning this invention are explained with reference to an attached drawing.

[0022] Drawing 1 and 2 are the perspective diagram and its II-II line cross section of the body fluid processing supply 1. The processing supply 1 is for processing at least one side of feces and urine, and is suitable for using together with a diaper cover or the worn trousers.

[0023] The processing supply 1 has the liquid permeability inner surface sheet 2, the non-liquid permeability outside surface sheet 3, and both [these] the sheets 2 and the absorptivity core 4 which intervenes among three. The cover sheet section 7 is formed by the body fluid absorption section 6 being formed, extending from the periphery of a core 4, and overlap and the joined inside-and-outside side sheets 2 and 3 being turned [in the periphery of a core 4] up by the inner surface sheet 2, the outside sheet 3, and the core 4 to the upper part of the absorption section 6. The opening 8 surrounded in the cover sheet section 7 is formed in the central region by the side of the inner surface of the body fluid absorption section 6. The cover sheet section 7 had the elastic member 12 annularly prolonged along the edge of a opening 8, and this elastic member 12 has joined it to one [at least] inner surface of the inside-and-outside side sheets 2 and 3 in the state of expanding. The amount of point has the edged front end section 41 and the edged back end section 42, and these both ends 41 and the pars intermedia 43 located among 42, width of face becomes large gradually toward the pars intermedia 43 from the front end section 41, and from the back end section 42, the processing supply 1 is formed so that width of face may become large toward pars intermedia 43, and width of face is the largest near the back end section 42. A binder 9 is applied to the underside of the outside sheet 3 of the absorption section 6, and coat protection is carried out by the releasing paper 11.

[0024] Drawing 3 is a partial fracture plan when attaching the processing supply 1 in a diaper cover 21. A diaper cover 21 is the laminate of the inner surface sheet 22 made from a plastic film, and the outside sheet 23 made of a nonwoven fabric, and is presenting the sandglass mold. A diaper cover 21 has the circumference region 26 of a forward fuselage assembly, the circumference region 27 of a back drum, and both [these] the regions 26 and the length-from-the-crotch-to-the-cuff region 28 in which it is located among 27 in a cross direction, and the edges on both sides of the length-from-the-crotch-to-the-cuff region 28 are curving toward the inside of a diaper cover 21. In the length-from-the-crotch-to-the-cuff region 28, along with the side edge, the circumference elastic member 29 of a foot extended, and this elastic member 29 has joined to one [at least] inner surface of the inside-and-outside side sheets 22 and 23 in the state of expanding. The processing supply 1 which removed the releasing paper 11 is stuck on the inner surface applied to the length-from-the-crotch-to-the-cuff region 28 dismountable through the binder 9 from the circumference region 27 of a back drum. This processing supply 1 can

change the installation location suitably.
[0025] the time of wearing the conventional disposable diaper by a diaper cover's 21 having the tape fastener 31 in the edges-on-both-sides section of the circumference region 27 of a back drum, and using this fastener 31 — the same — the assembly of the processing supply 1 of drawing 3 , and a diaper cover 21 — wearing — the opening 8 of the processing supply 1 — diaper 1 wearer's anus can be mostly located in the center.
[0026] If the processing supply 1 is used in this way, stools will be excreted into a opening 8 and will not soil a diaper cover 21. When throwing away the stools, the activity thrown away since what is necessary is not to have the big diaper cover 21 but to have only the small supply 1 becomes easy. When the front end section 41 currently formed so that width of face may become narrow gradually and the amount of point may sharpen was located in the length-from-the-crotch-to-the-cuff region 28 and a diaper cover 21 is worn, the front end section 41 fits in the crotch section reasonable, and there is no feeling of the different sum by having used the processing supply 1. Moreover, especially the about 42 back end section has wide width of face, and can receive many stools in the inside. The processing supply 1 can also be stuck on a diaper cover 21 so that adhesion of a binder 9 may be made high and cannot be removed. Moreover, the processing supply 1 can be replaced with a diaper cover 21, and can also be used, being able to attach in the inner surface of a disposable diaper or trousers.
[0027] Drawing 4 is a drawing in which the manufacturing process of the processing supply 1 of drawing 1 is shown by (1) - (3). At a process (1), it is joined with hot melt adhesive (not shown), and the portion into which the liquid permeability inner surface sheet 2 of the trapezoid configuration where magnitude was the same and did a handstand, and the outside sheet 3 of non-liquid permeability lay on top of the center section of these sheets 2 and 3 on both sides of the absorptivity core 4, and extend from the periphery of a core 4 forms the trapezoid layered product 40. A layered product 40 has the raised bottom 44 and lower base 45 which are prolonged between edges on both sides 42 and these edges on both sides 42, and the raised bottom 44 is formed for a long time than a lower base 45. Inside the edges on both sides 42 of a layered product 40, an elastic member 12 is joined in the shape of a straight line in the state of expanding through hot melt adhesive (not shown). In the example of a graphic display, an elastic member 12 is located between the inside-and-outside side sheet 2 and 3, and is joined to at least one side of these sheets 2 and 3. A core 4 is joinable to at least one side of the inside-and-outside side sheets 2 and 3. In addition, at the process (2), the binder 9 beforehand applied to the outside sheet 3 is protected with the releasing paper 11.
[0028] At a process (2), a layered product 40 carries out the inner surface sheet 2 inside, and is bent by center line C-C, and the portions in alignment with the portions and lower base 45 in alignment with the raised bottom 44 which overlap by the bending are joined with hot melt adhesive 47 and 48 (refer to process (2)). The

binder 9 applied in the phase before Process b is covered with the outside sheet 3 by the releasing paper 11. In addition, the bent layered product 40 is shown by partial fracture drawing.

[0029] At a process (3), an elastic member 12 is released from an expanding condition, and contracts. With the contraction, the inside-and-outside side sheets 2 and 3 of the portion which has extended from the core 4 carry out the inner surface sheet 2 inside, are bent in the periphery of a core 4, and serve as a bonnet and the cover sheet section 7 which forms a opening 8 in the center-section upper part of a core 4 from the upper part in the portion along the periphery of a core 4. Moreover, it becomes the front end section 41 near the raised bottom 44 of a layered product 40, and becomes the back end section 42 near the lower base 45. In this way, drawing 1 and the processing supply 1 of 2 with which an elastic member 12 draws an arc and is prolonged along the edge of a opening 8 are obtained.

[0030] As for the processing supply 1, the depth of the processing supply 1 with which between the order edge 41 and 42 curves to the outside of a supply 1, and results from a opening 8 to a core 4 becomes deep as the amount of contraction of an elastic member 12 becomes large.

[0031] Drawing 5 is the same drawing as drawing 1 which shows an example of the mode of the processing supply 1. The front end section 41 and the back end section 42 are sharp almost similarly, and, as for pars intermedia 43, this processing supply 1 has almost uniform width of face between the order edge 41 and 42. However, this processing supply 1 has the same cross-section structure as drawing 2 .

[0032] Drawing 6 is a plan when attaching the processing supply 1 of drawing 5 in the length-from-the-crotch-to-the-cuff region 28 of a diaper cover 21. The size between the order edge 41 and 42 is long, the opening 8 is also formed greatly, and the processing supply 1 of drawing 6 can receive stools and urine from it of drawing 3 .

[0033] Drawing 7 , and 8 and 9 are the same as that of drawing 5 which shows an example of the mode of the processing supply 1, however they are with the drawing with which the part is fractured, and the drawing in which the VIII-VIII line and IX-IX line cutting plane of drawing 7 are shown. With this processing supply 1, the band-like elastic member 12 of 5-50mm width of face is annularly prolonged on the edge of a opening 8. A member 12 is what covered elongated thread rubber of two or more articles 12A with nonwoven fabric 12B, and the outside sheet 3 turned up in the inside of a supply 1 has joined it to the crosswise pars intermedia of a member 12. If a supply 1 is worn, the elastic member 12 (refer to drawing 8) which spread so that it might collaborate with the outside sheet 3 in the interstitial segment 43 of the order edges 41 and 42 and an about T character mold might be drawn contacts a wearer's skin in a large area, and the leakage of the feces and urine from a supply 1 can be prevented. an elastic member 12 enables it to draw a configuration like drawing 8 with the outside sheet 3 — being alike — as for the thing nearer to the outside of a member 12, it is more desirable to make it expanding stress become low

among thread rubber of two or more articles 12A prolonged annularly. Moreover, as shown to drawing 9 by near the supply 1 order edges 41 and 42, the thing of the underside portion of an elastic member 12 which the whole has joined to the outside surface of the outside sheet 3 mostly is desirable. Unlike it of drawing 2 , from the periphery of a core 4, the outside sheet 3 extends for a long time, and is turned up rather than the inner surface sheet 2 with the supply 1 of drawing 8 . The cover sheet section 7 which has covered near the periphery of the body fluid absorption section 6 is formed mainly with the outside sheet 3 of non-liquid permeability.

[0034] Drawing 10 and 11 are the side elevation of the process for manufacturing continuously the processing supply 1 shown in drawing 5 , and the plan of the main portions in the side elevation. In process g-k of drawing 10 , if it is original so that the absorptivity core 104 can be directly seen, the nonwoven fabric 102 and plastic film 103 which have covered the core 104 are fractured.

[0035] in these drawing 10 and 11, the web of the non-liquid permeability plastic film 103 used as the outside sheet 3 of the body fluid absorption section 6 is supplied to the right continuously (drawing 11 -- the bottom from a top) from the left of drawing 10 at Process a.

[0036] At Process b, the hot melt adhesive (not shown) breathed out from the 1st nozzle 131 is applied to the edges-on-both-sides section of a film 103.

[0037] At Process c, the elastic member 112 of elasticity continues in the shape of a straight line in the state of expanding inside the edges on both sides of a film 103, and is supplied to it, and it is joined by the adhesives of Process b.

[0038] At Process d, the hot melt adhesive (not shown) breathed out from the 2nd nozzle 132 is applied in the cross direction and the length direction of a film 103 intermittently or continuously.

[0039] At Process e, the absorptivity core 104 carried by the feeder 134 is intermittently arranged along with the longitudinal direction of a film 103 in the crosswise central region of a film 103, and is joined to a film 103 by the adhesives of Process d.

[0040] At Processes f and g, the web of the liquid permeability nonwoven fabric 102 which should serve as the inner surface sheet 2 of the body fluid absorption section 6 is supplied continuously. It has the almost same width of face as a film 103, the whole film 103 and a core 104 are covered, it is joined to a film 103 by the adhesives of Process d, and a nonwoven fabric 102 forms the web which consists of a nonwoven fabric 102, a film 103, and a core 104.

[0041] At Process h, the adhesives 136 (refer to drawing 11) breathed out from the 3rd nozzle 133 are applied to the upper surface of a nonwoven fabric 102 so that it may extend crosswise [of a nonwoven fabric 102] among adjacent core 104. Adhesives 136 are applied to the range from one side of edges on both sides to center line C-C (refer to drawing 11) at least among the whole width of face of a nonwoven fabric 102, and it is applied to the whole width of face in the example of drawing 11 .

[0042] At Process i, the overlapping nonwoven fabric 102 and film 103 carry out a nonwoven fabric 102 inside, and are turned up along with center line C-C, and nonwoven fabric 102 are joined through adhesives 136.
[0043] At Processes j and k, in the travelling direction of a process, the overlapping nonwoven fabric 102 and film 103 are cut by the cutter 137, and the processing supply 1 with which the individual exception was turned up is obtained so that the field where adhesives 136 were applied may be bisected to forward and backward.
[0044] The turned-up processing supply 1 can extend at Process l. It extends from the periphery of a core 104, and overlap, and the nonwoven fabric 102 and film 103 which have been joined will be bent with the contraction in the periphery of a core 104, and will serve as the cover sheet section 7 as shown in drawing 5 , and a supply 1 will form a opening 8, if an elastic member 112 contracts. However, without the ability extending like drawing 5 , the processing supply 1 is supplied to a need person, while it had been turned up by it, and it can be opened after that. Process l can be skipped when such.
[0045] Each of the nonwoven fabric 102 used by this manufacturing process, a film 103, a core 104, and an elastic member 112 serves as the inner surface sheet 2 of the processing supply 1, the outside sheet 3, a core 4, and an elastic member 12.
[0046] Drawing 12 is the XII-XII line cross section of the web obtained at the process g of drawing 11 . The core 104 and the elastic member 112 are covered with the nonwoven fabric 102 and the film 103 in this drawing.
[0047] Drawing 13 is the same drawing as drawing 12 which shows an example of the web obtained at the process g of drawing 11 . The side edge section of a film 103 is turned up and the elastic member 112 is covered in this drawing by that piled-up film 103. What is necessary is to use the film 103 with width of face wider than a nonwoven fabric 102, and just to add the process for turning up the side edge section of a film 103, as shown in drawing to the process of drawing 10 , in order to obtain the processing supply 1 of this mode.
[0048] Drawing 14 is the same drawing as the process i of drawing 11 which shows other examples of the embodiment of this invention. In this mode, the spreading region of the parallel adhesives 136 of two articles is mutually formed between the adjacent cores 104, and a web is cut by the subsequent process j between the adhesives 136 of these two articles. There is no possibility of adhesives 136 being exposed to the end face which it was cut and was produced with the processing supply 1 obtained, and stimulating a wearer's skin strongly.
[0049] In this invention, if the member of the processing supply 1 is the thing of heat joining nature, it is also possible to join members by joining, without using adhesives. The processing supply 1 does not necessarily need the binder 9 shown in drawing 2 . However, if needed, the spreading process of a binder 9 can be established between process b-h of drawing 10 . Moreover, it can replace with a binder 9, the hook member or loop member of the mechanical fastener known for a trade name piece of Velcro etc. can be joined to the outside sheet 3, and it can be made the means for

attaching the processing supply 1 firmly to the clothes of diaper cover 21 grade.
[0050]
[Effect of the Invention] According to the disposable body fluid processing supply concerning this invention, only feces can be held in this supply and a big diaper is not soiled by feces. The front end section of a supply is formed so that the amount of point may sharpen, and width of face may become narrow gradually, and it fits in a supply wearer's crotch reasonable.
[0051] When attaching an elastic member along the edge of a opening, it is not necessary to make an elastic member rock like the conventional technology using a traverse means, and according to the manufacture method of the body fluid processing supply concerning this invention, since an elastic member can be supplied linearly, it does not have a possibility of reducing the production rate of a processing supply with the speed of supply of an elastic member. Moreover, since supply equipment will become comparatively easy when supplying an elastic member in this way, it becomes possible to suppress cost lifting of the processing supply by the plant-and-equipment investment.

[Translation done.]

* NOTICES *

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1] The perspective diagram of a processing supply.
[Drawing 2] The II-II line cross section of drawing 1 .
[Drawing 3] The plan when attaching a processing supply in bundle covering.
[Drawing 4] The drawing in which an example of a processing supply manufacturing process is shown.
[Drawing 5] The perspective diagram of the processing supply of a different configuration from drawing 1 .
[Drawing 6] The plan when attaching the processing supply of drawing 5 in bundle covering.

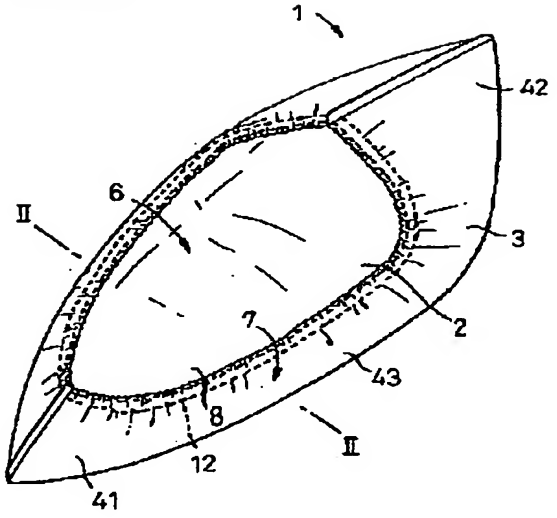
[Drawing 7] The partial fracture perspective diagram of the processing supply of a different configuration from drawing 5 .
[Drawing 8] The VIII-VIII line cross section of drawing 7 .
[Drawing 9] The IX-IX line important section cross section of drawing 7 .
[Drawing 10] The side elevation of the manufacturing process of the processing supply of drawing 5 .
[Drawing 11] The plan for the body of the process of drawing 10 .
[Drawing 12] The XII-XII line cross section of drawing 11 .
[Drawing 13] The same drawing as drawing 12 which shows an example of the configuration of a web.
[Drawing 14] The part drawing of a manufacturing process showing an example of an embodiment.
[Description of Notations]
1 Processing Supply
2 Inner Surface Sheet
3 Outside Sheet
4 Core
6 Body Fluid Absorption Section
7 Cover Sheet
8 Opening
12 Elastic Member
102 1st Web (Liquid Permeability Inner Surface Sheet)
103 2nd Web (Non-Liquid Permeability Outside Surface Sheet)
104 Core
112 Elastic Member
136 About (Adhesives) Joint

[Translation done.]

* NOTICES *

DRAWINGS

[Drawing 1]



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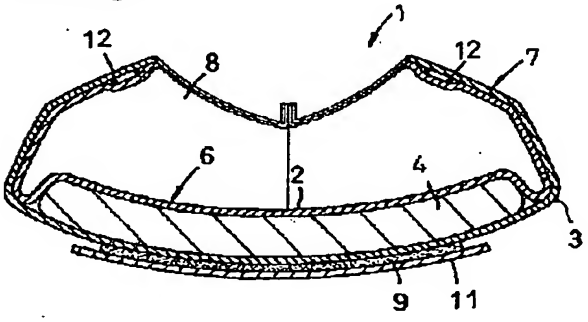

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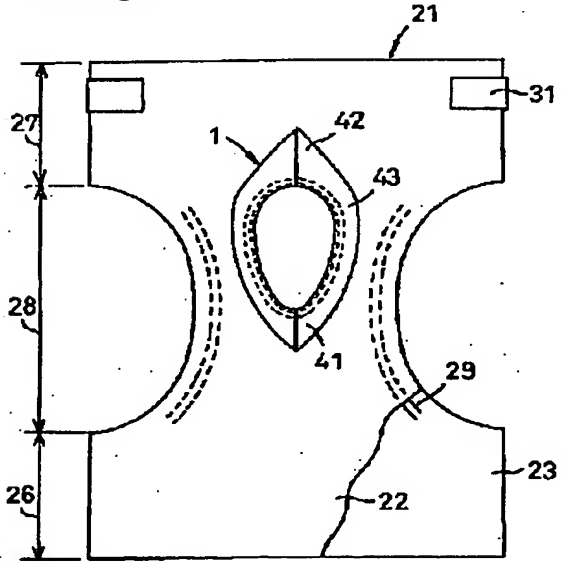

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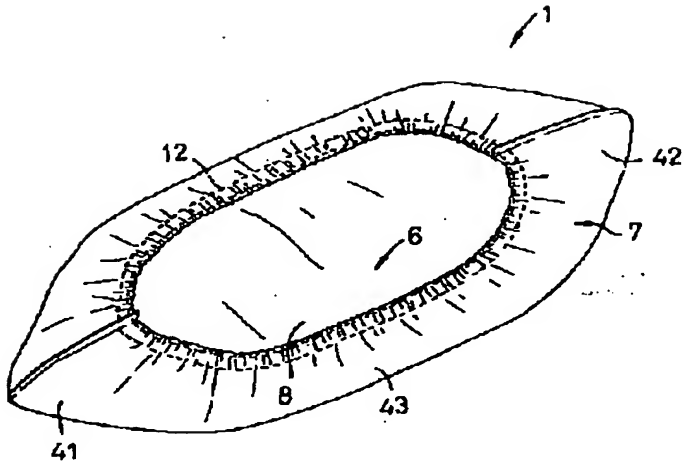

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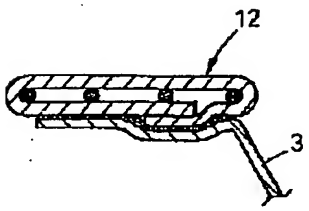

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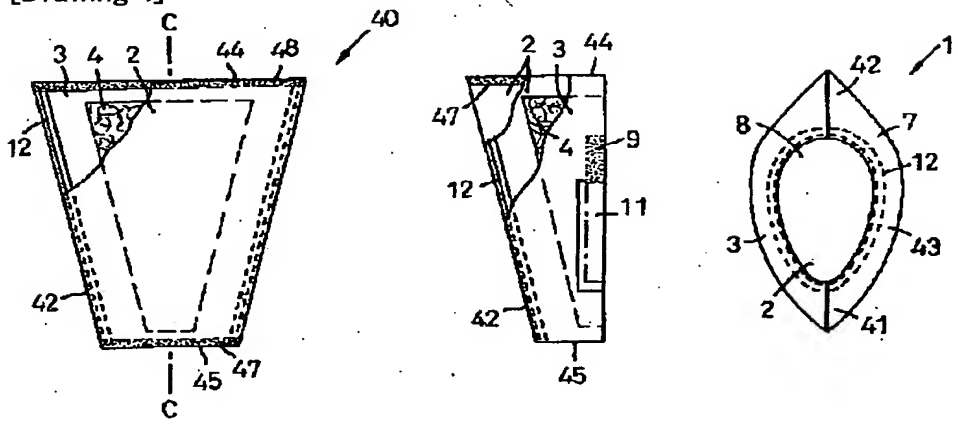
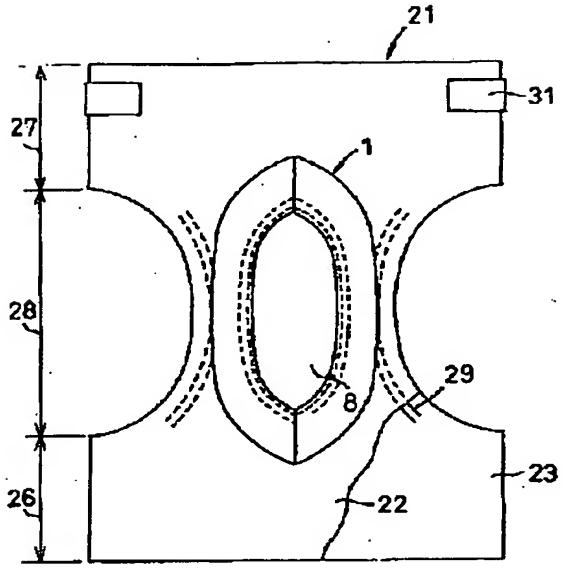


(1) (2) (3)

[Drawing 6]



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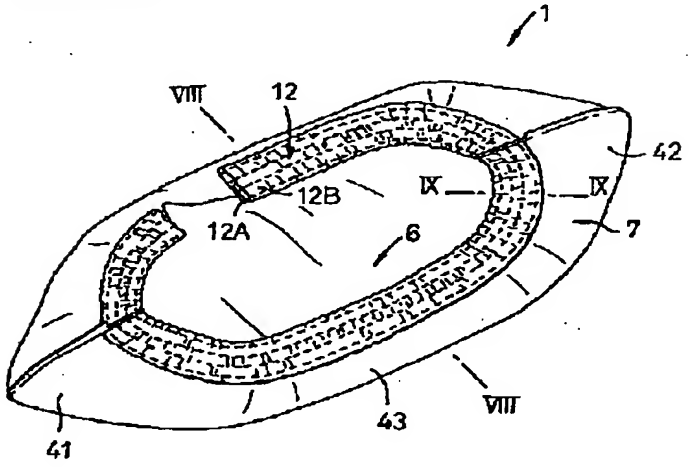

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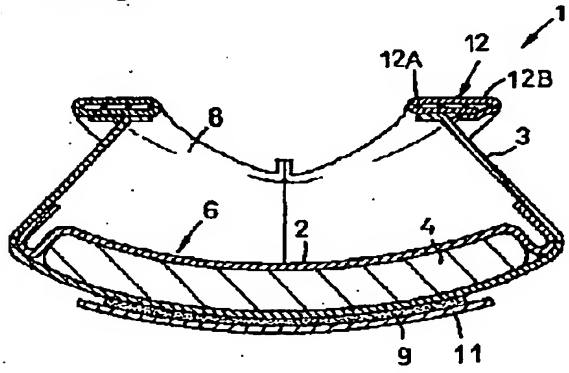

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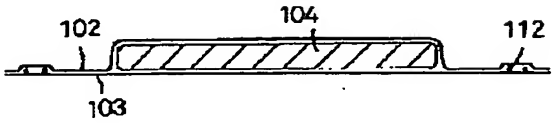

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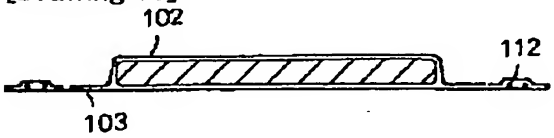
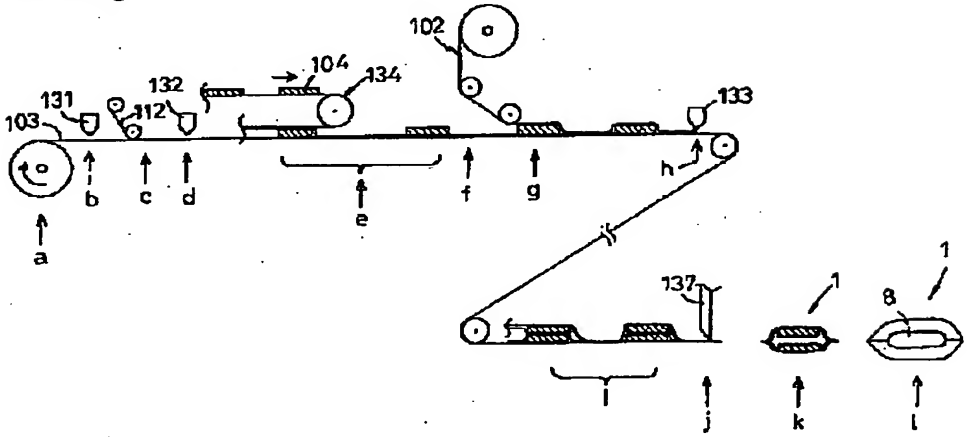
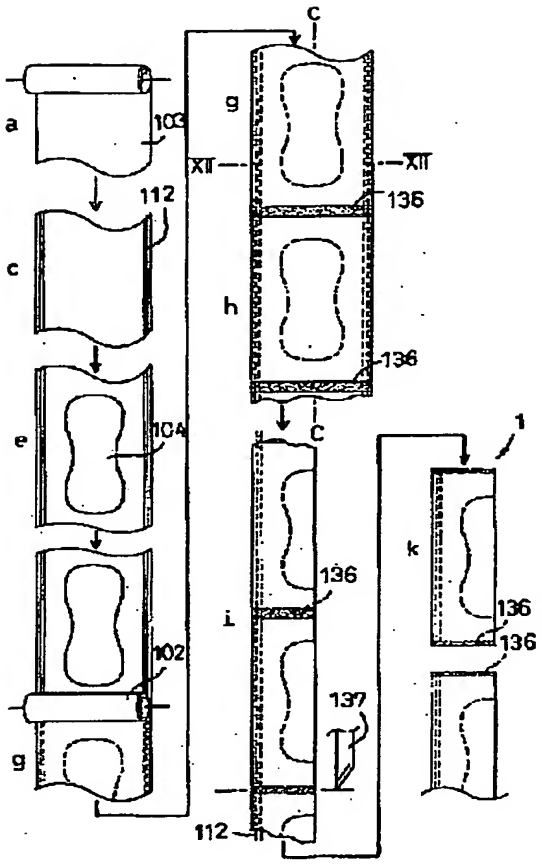


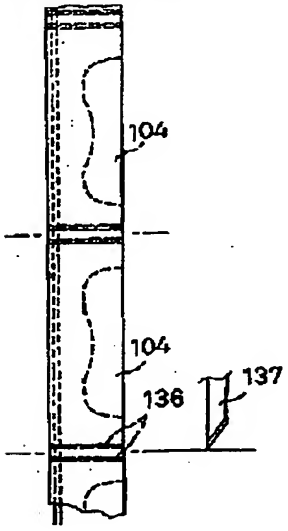
[Drawing 10]



[Drawing 11]



[Drawing 14]



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13/15		Ａ６１Ｆ　5/44	Ｈ	
5/44		Ａ４１Ｂ　13/02	Ｓ	

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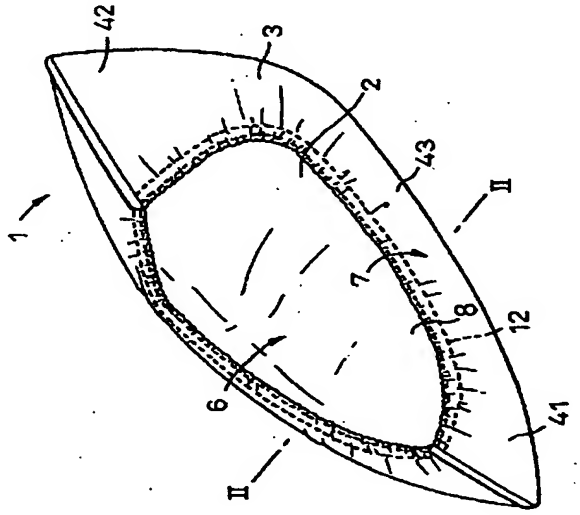
最終頁に続く

(54)【発明の名称】　使い捨て体液処理用品およびその製造方法

(57)【要約】
【課題】　排泄された便を収容するのに好適な開口を有する使い捨て体液処理用品の提供。
【解決手段】　体液吸収部６の上方にカバーシート部分７によって囲繞された開口８を有する体液処理用品１が、長手方向に前端部４１と後端部４２とこれら両端部４１，４２間に位置する中間部４３とを有し、中間部４３で幅が最も広くなるように形成される。



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【特許請求の範囲】

【請求項１】　透液性内面シートと、不透液性外面シートと、これら両シート間に介在する吸収性コアとによって体液吸収部が形成され、前記内外面シートの少なくとも一方と一体をなすカバーシート部分が前記吸収部の周縁部分に沿って該周縁部分の内面を上方から覆うように延在して、前記吸収部の中央部分の上方に、前記カバーシート部分によって囲繞された開口が形成され、前記カバーシート部分が前記開口の縁に沿って弾性的な伸縮性を有する使い捨て体液処理用品において、
前記吸収部が前後方向と、この方向と交差する幅方向とを有し、前記前後方向に前端部と後端部とこれら両端部間に位置する中間部とが形成され、前記吸収部の幅が前記中間部で最も広くなるように形成されていることを特徴とする前記用品。

【請求項２】　前記吸収部は、前記前後端部から前記中間部へ向かって前記幅が次第に広くなるように形成されている請求項１記載の用品。

【請求項３】　前記中間部は前記後端部よりの部位で前記幅が最も広くなっている請求項１または２記載の用品。

【請求項４】　前記前後端部が前記カバーシート部分によって覆われている請求項１記載の用品。

【請求項５】　前記開口の縁部には幅が５～５０ｍｍの帯状弾性部材が取り付けられ、前記中間部では前記カバーシートが前記弾性部材下面の幅方向中央部に接合し、前記用品が着用されたときに前記弾性部材とカバーシートとがほぼＴ字型の断面を形成することが可能である請求項１～４のいずれかに記載の用品。

【請求項６】　透液性内面シートと、不透液性外面シートと、これら両シート間に介在する吸収性コアとによって体液吸収部が形成され、前記内外面シートの少なくとも一方と一体をなすカバーシート部分が前記吸収部の周縁部分に沿って該周縁部分の内面を上方から覆うように延在して、前記吸収部の中央部分の上方に、前記カバーシート部分によって囲繞された開口が形成され、前記カバーシート部分が前記開口の縁に沿って弾性的な伸縮性を有する使い捨て体液処理用品の製造方法において、
ａ．前記内面シートと外面シートとで前記コアを被覆し、前記内外面シートを前記コアの周縁から延出する部分で接合して積層体を得る工程と、
ｂ．前記内外面シートいずれかの前記コアを挟んで並行する両側縁部に弾性部材を伸長状態で直線状に接合する工程と、
ｃ．前記両側縁部の弾性部材どうしが重なり合うように、前記内面シートを内側にして前記積層体を折り重ねる工程と、
ｄ．折り重ねた前記積層体を、前記両側縁部と交差し、前記コアを挟んで互いに並行する２本の仮想線に沿って接合する工程と、

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ｅ．前記工程ｄの後に、前記弾性部材を収縮させる工程とを含むことを特徴とする前記製造方法。

【請求項７】　前記弾性部材が５～５０ｍｍの幅を有する帯状のものであって、該部材を幅方向の中間部分において前記両側縁部に接合する請求項６記載の製造方法。

【請求項８】　前記用品を着衣に止着するための手段が前記外面シートに形成される工程を含む請求項６または７記載の製造方法。

【請求項９】　透液性内面シートと、不透液性外面シートと、これら両シート間に介在する吸収性コアとによって体液吸収部が形成され、前記内外面シートの少なくとも一方と一体をなすカバーシート部分が前記吸収部の周縁部分に沿って該周縁部分の内面を上方から覆うように延在して、前記吸収部の中央部分の上方に、前記カバーシート部分によって囲繞された開口が形成され、前記カバーシート部分が前記開口の縁に沿って弾性的な伸縮性を有する使い捨て体液処理用品の連続的な製造方法において、
ａ．前記内面シートを形成するための第１ウェブおよび前記外面シートを形成するための第２ウェブのそれぞれを、一方向へ連続的に供給する工程と、
ｂ．弾性部材を前記一方向へ連続的に供給し、前記第１，２ウェブいずれかの両側縁部に伸長状態で直線状に接合する工程と、
ｃ．前記第１，２ウェブいずれかの幅方向中央域に前記コアを前記一方向において間欠的に供給する工程と、
ｄ．前記弾性部材とコアとを供給した後に、前記コアをサンドウィッチ状に被覆するように前記第１，２ウェブを重ね合わせ、これら第１，２ウェブと弾性部材とコアとからなる第３ウェブを形成する工程と、
ｅ．前記両側縁部の弾性部材どうしが重なり合うように、前記第１ウェブを内側にして、前記第３ウェブを折り重ねる工程と、
ｆ．折り重ねた前記第３ウェブの互いに当接する前記第１ウェブどうしを、隣り合う前記コアとコアとの間の部位で接合する工程と、
ｇ．前記工程ｆで接合した前記第３ウェブを、隣り合う前記コアとコアとの間において、前記第３ウェブの幅方向へ延びる仮想線に沿って、該仮想線を境界とする両側それぞれに前記工程ｆで接合した部位が部分的に残るように切断する工程と、
ｈ．前記工程ｇの後に、前記弾性部材を収縮させる工程とを含むことを特徴とする前記製造方法。

【請求項１０】　前記弾性部材が５～５０ｍｍの幅を有する帯状のものであって、該部材を幅方向の中間部分において前記両側縁部に接合する請求項９記載の製造方法。

【請求項１１】　前記用品を着衣に止着するための手段が前記第２ウェブに形成される工程を含む請求項９または１０記載の製造方法。

【発明の詳細な説明】

【０００１】

【発明の属する技術分野】この発明は、使い捨ておむつや使い捨て失禁パンツ等と組み合わせて使用するのに好適な使い捨て体液処理用品の製造方法に関する。

【０００２】

【従来の技術】特開平５－２９３１３８号公報には、使い捨ておむつの肌当て上面シートに弾性開口部を形成する方法が開示されている。この上面シートでは、開口の縁に沿って弾性部材が伸長状態で弧を画いている。上面シートとして使用するためのシートを連続的に流す一方、トラバース手段を使用して伸長状態にある弾性部材をそのシートの幅方向へ揺動させながら供給することによって、連続する上面シートの上で弾性部材に弧を画かせることができる。

【０００３】

【発明が解決しようとする課題】上面シートに弾性開口部を形成する前記公知の方法では、シートを高速供給することができても、トラバース手段の高速運転には限度があり、単位時間当りのおむつ生産量をあまり高くすることができない。また、おむつの生産ラインは、トラバース手段の採用によって設備投資が嵩み、おむつの製造コストが上昇する。

【０００４】この発明が課題とするところは、前記おむつのような弾性開口部を有する使い捨ての体液処理用品を簡易な方法で製造できるようにして、前記従来技術の諸問題を解消することにある。

【０００５】

【課題を解決するための手段】この発明において、前記課題は、使い捨て体液処理用品に係る第１発明、および前記用品に係る第１の製造方法（以下では第２発明という）と第２の製造方法（以下では第３発明という）とによって解決される。

【０００６】前記第１発明が前提とするのは、透液性内面シートと、不透液性外面シートと、これら両シート間に介在する吸収性コアとによって体液吸収部が形成され、前記内外面シートの少なくとも一方と一体をなすカバーシート部分が前記吸収部の周縁部分に沿って該周縁部分の内面を上方から覆うように延在して、前記吸収部の中央部分の上方に、前記カバーシート部分によって囲繞された開口が形成され、前記カバーシート部分が前記開口の縁に沿って弾性的な伸縮性を有する使い捨て体液処理用品である。

【０００７】かかる前提において、前記第１発明が特徴とするところは、前記吸収部が前後方向と、この方向と交差する幅方向とを有し、前記前後方向に前端部と後端部とこれら両端部間に位置する中間部とが形成され、前記吸収部の幅が前記中間部で最も広くなるように形成されていること、にある。

【０００８】前記第１発明には、次のような実施態様がある。

【０００９】（１）前記吸収部は、前記前後端部から前記中間部へ向かって前記幅が次第に広くなるように形成されている。

【００１０】（２）前記中間部は前記後端部よりの部位で前記幅が最も広くなっている。

【００１１】（３）前記前後端部が前記カバーシート部分によって覆われている。

【００１２】（４）前記開口の縁部には幅が５～５０ｍｍの帯状弾性部材が取り付けられ、前記中間部では前記カバーシートが前記弾性部材下面の幅方向中央部に接合し、前記用品が着用されたときに前記弾性部材とカバーシートとがほぼＴ字型の断面を形成することが可能である。

【００１３】前記第２，３発明のうちの第２発明が前提とするのは、透液性内面シートと、不透液性外面シートと、これら両シート間に介在する吸収性コアとによって体液吸収部が形成され、前記内外面シートの少なくとも一方と一体をなすカバーシート部分が前記吸収部の周縁部分に沿って該周縁部分の内面を上方から覆うように延在して、前記吸収部の中央部分の上方に、前記カバーシート部分によって囲繞された開口が形成され、前記カバーシート部分が前記開口の縁に沿って弾性的な伸縮性を有する使い捨て体液処理用品の製造方法である。

【００１４】かかる前提において、前記第２発明が特徴とするところは、前記製造方法に下記工程が含まれることにある。

【００１５】ａ．前記内面シートと外面シートとで前記コアを被覆し、前記内外面シートを前記コアの周縁から延出する部分で接合して積層体を得る工程と、

ｂ．前記内外面シートいずれかの前記コアを挟んで並行する両側縁部に弾性部材を伸長状態で直線状に接合する工程と、

ｃ．前記両側縁部の弾性部材どうしが重なり合うように、前記内面シートを内側にして前記積層体を折り重ねる工程と、

ｄ．折り重ねた前記積層体を、前記両側縁部と交差し、前記コアを挟んで互いに並行する２本の仮想線に沿って接合する工程と、

ｅ．前記工程ｄの後に前記弾性部材を収縮させる工程。

【００１６】前記第２発明の好ましい実施態様において、前記弾性部材が５～５０ｍｍの幅を有する帯状のものであって、該部材を幅方向の中間部分において前記両側縁部に接合する。また、前記製造方法は、前記用品を着衣に止着するための手段が前記外面シートに形成される工程を含むことができる。

【００１７】前記第３発明が前提とするのは、透液性内面シートと、不透液性外面シートと、これら両シート間に介在する吸収性コアとによって体液吸収部が形成され、前記内外面シートの少なくとも一方と一体をなすカ

バーシート部分が前記吸収部の周縁部分に沿って該周縁部分の内面を上方から覆うように延在して、前記吸収部の中央部分の上方に、前記カバーシート部分によって囲繞された開口が形成され、前記カバーシート部分が前記開口の縁に沿って弾性的な伸縮性を有する使い捨て体液処理用品の連続的な製造方法である。

【００１８】かかる前提において、前記第３発明が特徴とするところは、前記製造方法に下記工程が含まれることにある。

【００１９】ａ．前記内面シートを形成するための第１ウェブおよび前記外面シートを形成するための第２ウェブのそれぞれを、一方向へ連続的に供給する工程と、

ｂ．弾性部材を前記一方向へ連続的に供給し、前記第１，２ウェブいずれかの両側縁部に伸長状態で直線状に接合する工程と、

ｃ．前記第１，２ウェブいずれかの幅方向中央域に前記コアを前記一方向へ間欠的に供給する工程と、

ｄ．前記弾性部材とコアとを供給した後に、前記コアをサンドウィッチ状に被覆するように前記第１，２ウェブを重ね合わせ、これら第１，２ウェブと弾性部材とコアとからなる第３ウェブを形成する工程と、

ｅ．前記両側縁部の弾性部材どうしが重なり合うように、前記第１ウェブを内側にして、前記第３ウェブを折り重ねる工程と、

ｆ．折り重ねた前記第３ウェブの互いに当接する前記第１ウェブどうしを、隣り合う前記コアとコアとの間の部位で接合する工程と、

ｇ．前記工程ｆで接合した前記第３ウェブを、隣り合う前記コアとコアとの間において、前記第３ウェブの幅方向へ延びる仮想線に沿って、該仮想線を境界とする両側それぞれに前記工程ｆで接合した部位が部分的に残るように切断する工程と、

ｈ．前記工程ｇの後に、前記弾性部材を収縮させる工程。

【００２０】前記第３発明の好ましい実施態様では、前記弾性部材が５～５０ｍｍの幅を有する帯状のものであって、該部材を幅方向の中間部分において前記両側縁部に接合することができる。また、前記製造方法は、前記用品を着衣に止着するための手段が前記第２ウェブに形成される工程を含むことができる。

【００２１】

【発明の実施の形態】添付の図面を参照して、この発明に係る使い捨て体液処理用品の製造方法の詳細を説明すると、以下のとおりである。

【００２２】図１，２は、体液処理用品１の斜視図と、そのＩＩ－ＩＩ線断面図である。処理用品１は糞尿の少なくとも一方を処理するためのもので、おむつカバーや着用したパンツと併用するのに適している。

【００２３】処理用品１は、透液性内面シート２と、不透液性外面シート３と、これら両シート２，３間に介在する吸収性コア４とを有し、内面シート２と外面シート３とコア４とによって体液吸収部６が形成され、コア４の周縁から延出して重なり合い、互いに接合している内外面シート２，３がコア４の周縁で吸収部６の上方へ折り返されることでカバーシート部７が形成されている。体液吸収部６の内面側の中央域には、カバーシート部７で囲繞された開口８が形成されている。カバーシート部７は開口８の縁に沿って環状に延びる弾性部材１２を有し、かかる弾性部材１２が内外面シート２，３の少なくとも一方の内面に伸長状態で接合している。処理用品１は、先端部分がとがった前端部４１と後端部４２と、これら両端部４１，４２間に位置する中間部４３とを有し、前端部４１から中間部４３へ向かって次第に幅が広くなり、また後端部４２から中間部４３へ向かって幅が広くなるように形成されていて、後端部４２の近傍で幅が最も広くなっている。吸収部６の外面シート３の下面には粘着剤９が塗布され、剥離紙１１によって被覆保護されている。

【００２４】図３は、処理用品１をおむつカバー２１に取り付けたときの部分破断平面図である。おむつカバー２１は、プラスチックフィルム製の内面シート２２と不織布製の外面シート２３との積層品であって、砂時計型を呈している。おむつカバー２１は、前後方向に前胴周り域２６と、後胴周り域２７と、これら両域２６，２７間に位置する股下域２８とを有し、股下域２８の両側縁がおむつカバー２１の内側へ向かって湾曲している。股下域２８では、側縁に沿って脚周り弾性部材２９が延在し、かかる弾性部材２９が内外面シート２２，２３の少なくとも一方の内面に伸長状態で接合している。後胴周り域２７から股下域２８にかけての内面には、剥離紙１１を剥がした処理用品１が粘着剤９を介して取り外し可能に貼り付けられている。かかる処理用品１は、その取り付け位置を適宜変更することができる。

【００２５】おむつカバー２１は後胴周り域２７の両側縁部にテープファスナ３１を有し、このファスナ３１を使用することによって、従来の使い捨ておむつを着用するときと同様に、図３の処理用品１とおむつカバー２１との組立体を着用し、処理用品１の開口８のほぼ中央におむつ１着用者の肛門を位置させることができる。

【００２６】処理用品１がこのように使用されると、糞が開口８の中へ排泄され、おむつカバー２１を汚すことがない。その糞を捨てるときには、大きなおむつカバー２１を持たず、小さな用品１だけを持てばよいから捨てる作業が楽になる。幅が次第に狭くなって先端部分がとがるように形成されている前端部４１を股下域２８に位置させると、おむつカバー２１を着用したときに、前端部４１が股間部に無理なくおさまって、処理用品１を使用したことによる異和感がない。また、後端部４２近傍は特に幅が広く、その内側には多くの糞を受け容れることができる。処理用品１は、粘着剤９の粘着力を高くし

て、取り外すことができないようにおむつカバー２１に貼り付けることもできる。また、処理用品１は、おむつカバー２１に代えて、使い捨ておむつやパンツの内面に取り付けて使用することもできる。

【００２７】図４は、図１の処理用品１の製造工程を（１）～（３）によって示す図面である。工程（１）では、大きさが同じで倒立した台形形状の透液性内面シート２と不透液性の外面シート３とが、これらシート２，３の中央部に吸収性コア４を挟んで重ね合わせられ、コア４の周縁から延出する部分がホットメルト接着剤（図示せず）で接合されて台形の積層体４０を形成する。積層体４０は、両側縁４２と、これら両側縁４２の間に延びる上底４４と下底４５とを有し、上底４４は下底４５よりも長く形成されている。積層体４０の両側縁４２の内側には、弾性部材１２がホットメルト接着剤（図示せず）を介して伸長状態で直線状に接合される。図示例では、弾性部材１２が、内外面シート２，３間に位置し、これらシート２，３の少なくとも一方に接合されている。コア４は、内外面シート２，３の少なくとも一方に接合することができる。なお、工程（２）では、外面シート３に予め塗布された粘着剤９が剥離紙１１で保護されている。

【００２８】工程（２）では、積層体４０が、内面シート２を内側にして中心線Ｃ－Ｃで折曲され、その折曲によって重なり合う上底４４に沿う部分どうしおよび下底４５に沿う部分どうしがホットメルト接着剤４７および４８（工程（２）参照）によって接合される。外面シート３では、工程ｂ以前の段階で塗布された粘着剤９が剥離紙１１で被覆されている。なお、折曲された積層体４０は、部分破断図で示されている。

【００２９】工程（３）では、弾性部材１２が伸長状態から解放されて収縮する。その収縮に伴って、コア４から延出している部分の内外面シート２，３は、内面シート２を内側にしてコア４の周縁で折曲され、コア４の周縁に沿う部分を上方から覆い、かつ、コア４の中央部上方に開口８を形成するカバーシート部７となる。また、積層体４０の上底４４の近傍が前端部４１となり、下底４５の近傍が後端部４２となる。かくして、開口８の縁に沿って弾性部材１２が弧を画いて延びる図１，２の処理用品１が得られる。

【００３０】処理用品１は、弾性部材１２の収縮量が大きくなるにつれて前後端部４１，４２間が用品１の外側へ湾曲し、開口８からコア４へ至る処理用品１の深さが深くなる。

【００３１】図５は、処理用品１の態様の一例を示す図１と同様の図面である。この処理用品１は、前端部４１と後端部４２とがほぼ同じようにとがっており、中間部４３は、前後端部４１，４２間においてほぼ一様な幅を有する。ただし、この処理用品１は、図２と同様な断面構造を有している。

【００３２】図６は、図５の処理用品１をおむつカバー２１の股下域２８に取り付けたときの平面図である。図６の処理用品１は、図３のそれよりも前後端部４１，４２間の寸法が長く、開口８も大きく形成されており、糞と尿とを受け容れることができる。

【００３３】図７，８，９は、処理用品１の態様の一例を示す図５と同様の、ただし、一部が破断されている図面と、図７のＶＩＩＩ－ＶＩＩＩ線およびＩＸ－ＩＸ線切断面を示す図面とである。この処理用品１では、開口８の縁に５～５０ｍｍ幅の帯状の弾性部材１２が環状に延びている。部材１２は、伸長した複数条の糸ゴム１２Ａを不織布１２Ｂで被覆したもので、部材１２の幅方向中間部には、用品１の内側へ折り返された外面シート３が接合している。用品１が着用されると、前後端部４１，４２の中間部分４３で外面シート３と協働してほぼＴ字型を画くように広がった弾性部材１２（図８参照）が、広い面積で着用者の肌に当接し、用品１からの糞尿の漏れを防止できる。弾性部材１２が外面シート３とともに図８のような形状を画くことができるようにするには、環状に延びる複数条の糸ゴム１２Ａのうちで、部材１２の外側に近いものほど伸長応力が低くなるようにすることが好ましい。また、用品１の前後端部４１，４２の近傍では、図９に示されるように弾性部材１２の下面部分のほぼ全体が外面シート３の外面に接合していることが好ましい。図８の用品１では、図２のそれと異なり、外面シート３が内面シート２よりもコア４の周縁から長く延出して折り返されている。体液吸収部６の周縁近傍を被覆しているカバーシート部７は、主として不透液性の外面シート３で形成されている。

【００３４】図１０，１１は、図５に示された処理用品１を連続的に製造するための工程の側面図と、その側面図における主要な部分の平面図である。図１０の工程ｇ～ｋでは、吸収性コア１０４が直接見えるように、本来であればコア１０４を被覆している不織布１０２とプラスチックフィルム１０３とが破断されている。

【００３５】これらの図１０，１１において、工程ａでは、体液吸収部６の外面シート３となる不透液性プラスチックフィルム１０３のウェブが、図１０の左から右へと（図１１では上から下へと）連続的に供給される。

【００３６】工程ｂでは、フィルム１０３の両側縁部に第１ノズル１３１から吐出されるホットメルト接着剤（図示せず）が塗布される。

【００３７】工程ｃでは、フィルム１０３の両側縁の内側に伸縮性の弾性部材１１２が伸長状態で直線状に連続して供給され、工程ｂの接着剤によって接合される。

【００３８】工程ｄでは、第２ノズル１３２から吐出されるホットメルト接着剤（図示せず）が、フィルム１０３の幅方向と長さ方向とに、間欠的または連続的に塗布される。

【００３９】工程ｅでは、供給装置１３４によって運ば

れた吸収性コア１０４が、フィルム１０３の幅方向中央域にフィルム１０３の長手方向に沿って間欠的に配置され、工程ｄの接着剤によってフィルム１０３に接合される。

【００４０】工程ｆ，ｇでは、体液吸収部６の内面シート２となるべき透液性不織布１０２のウェブが連続的に供給される。不織布１０２は、フィルム１０３とほぼ同じ幅を有し、フィルム１０３の全体とコア１０４とを被覆して、工程ｄの接着剤によってフィルム１０３に対して接合されて、不織布１０２とフィルム１０３とコア１０４とからなるウェブを形成する。

【００４１】工程ｈでは、第３ノズル１３３から吐出される接着剤１３６（図１１参照）が、隣り合うコア１０４どうしの間で不織布１０２の幅方向へ延びるように不織布１０２の上面に塗布される。接着剤１３６は、不織布１０２の幅全体のうちで少なくとも両側縁の一方から中心線Ｃ－Ｃ（図１１参照）までの範囲に塗布されるもので、図１１の例では、それが幅全体に塗布されている。

【００４２】工程ｉでは、重なり合う不織布１０２とフィルム１０３とが、不織布１０２を内側にして、中心線Ｃ－Ｃに沿って折り重ねられ、不織布１０２どうしが接着剤１３６を介して接合される。

【００４３】工程ｊ，ｋでは、工程の進行方向において、接着剤１３６が塗布された領域を前後へ二分するように、カッター１３７によって、重なり合う不織布１０２とフィルム１０３とが切断され、個別の折り重ねられた処理用品１が得られる。

【００４４】工程ｌでは、折り重ねられた処理用品１が広げられる。用品１は、弾性部材１１２が収縮すると、コア１０４の周縁から延出して重なり合い、互いに接合している不織布１０２とフィルム１０３とが、その収縮に伴ってコア１０４の周縁で折曲され、図５に示されているようなカバーシート部７となり、開口８を形成する。ただし、処理用品１は、図５のように広げられることなく、折り重ねられたままで需要者に供給され、その後に広げられることもある。このようなときには、工程ｌを省略することができる。

【００４５】この、製造工程で使用された不織布１０２，フィルム１０３，コア１０４，弾性部材１１２のそれぞれは、処理用品１の内面シート２，外面シート３，コア４，弾性部材１２となる。

【００４６】図１２は、図１１の工程ｇで得られるウェブのＸＩＩ－ＸＩＩ線断面図である。この図では、コア１０４と弾性部材１１２とが、不織布１０２とフィルム１０３とで被覆されている。

【００４７】図１３は、図１１の工程ｇで得られるウェブの一例を示す図１２と同様の図面である。この図では、フィルム１０３の側縁部が折り重ねられ、弾性部材１１２がその重ねられたフィルム１０３で被覆されている。かかる態様の処理用品１を得るには、不織布１０２よりも幅の広いフィルム１０３を使用し、フィルム１０３の側縁部を図のように折り重ねるための工程を図１０の工程に加えればよい。

【００４８】図１４は、この発明の実施態様の他の一例を示す図１１の工程ｉと同様の図面である。この態様では、隣り合うコア１０４の間に、互いに平行な２条の接着剤１３６の塗布域が形成されており、その後の工程ｊで、ウェブがこれら２条の接着剤１３６の間において切断される。得られる処理用品１では、切断されて生じた端面に接着剤１３６が露出して着用者の肌を強く刺激するという恐れがない。

【００４９】この発明において、処理用品１の部材が熱溶着性のものであれば、接着剤を使用せずに部材どうしを溶着によって接合することも可能である。処理用品１は、図２に示された粘着剤９を必ずしも必要としない。しかし、必要とするならば、図１０の工程ｂ～ｈの間に粘着剤９の塗布工程を設けることができる。また、粘着剤９に代えて、商品名マジックテープ等で知られるメカニカルファスナのフック部材またはループ部材を外面シート３に接合して、処理用品１をおむつカバー２１等の着衣に止着するための手段にすることができる。

【００５０】

【発明の効果】この発明に係る使い捨て体液処理用品によれば、糞便だけをこの用品内に収容することができて、大きなおむつを糞便で汚すことがない。用品の前端部は先端部分がとがるように幅が次第に狭くなるように形成されていて、用品着用者の股部に無理なくおさまる。

【００５１】この発明に係る体液処理用品の製造方法によれば、開口の縁に沿って弾性部材を取り付けるときに、従来技術のようにトラバース手段を使用して弾性部材を揺動させる必要がなく、弾性部材は直線的に供給できるから、弾性部材の供給速度によって処理用品の生産速度を低下させる恐れがない。また、弾性部材をこのように供給するときには、供給設備が比較的簡単なものになるから、その設備投資による処理用品のコスト上昇を抑えることが可能になる。

【図面の簡単な説明】

【図１】処理用品の斜視図。

【図２】図１のＩＩ－ＩＩ線断面図。

【図３】処理用品をおしめカバーに取り付けたときの平面図。

【図４】処理用品製造工程の一例を示す図面。

【図５】図１と異なる形状の処理用品の斜視図。

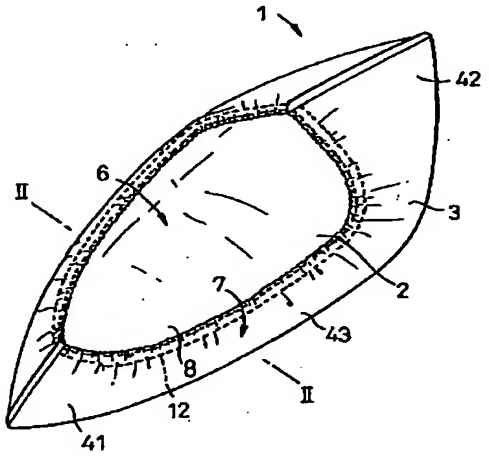
【図６】図５の処理用品をおしめカバーに取り付けたときの平面図。

【図７】図５と異なる形状の処理用品の部分破断斜視図。

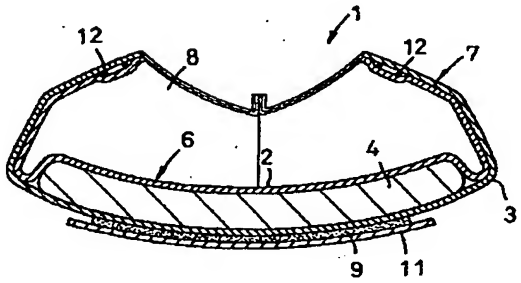
【図８】図７のＶＩＩＩ－ＶＩＩＩ線断面図。

【図９】図７のＩＸ－ＩＸ線要部断面図。
【図１０】図５の処理用品の製造工程の側面図。
【図１１】図１０の工程の主要部分の平面図。
【図１２】図１１のＸＩＩ－ＸＩＩ線断面図。
【図１３】ウェブの形状の一例を示す図１２と同様の図面。
【図１４】実施態様の一例を示す製造工程の部分図。
【符号の説明】
1　処理用品
2　内面シート
3　外面シート
＊４　コア
6　体液吸収部
7　カバーシート
8　開口
１２　弾性部材
１０２　第１ウェブ（透液性内面シート）
１０３　第２ウェブ（不透液性外面シート）
１０４　コア
１１２　弾性部材
１３６　接合部位（接着剤）

【図１】



【図２】



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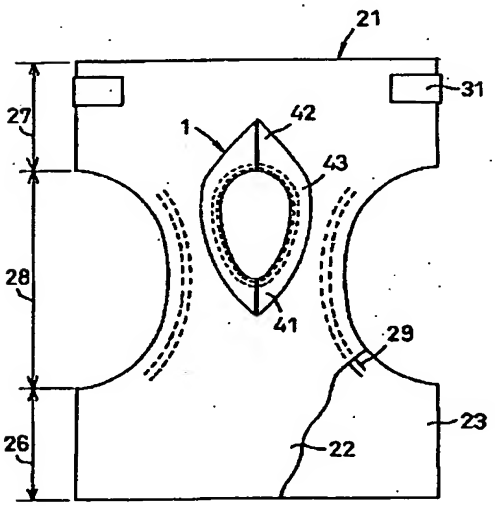

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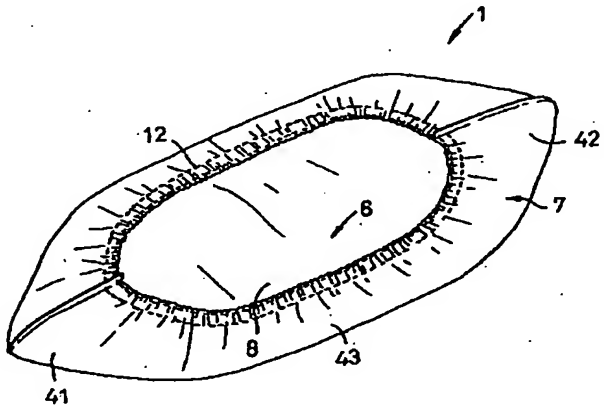

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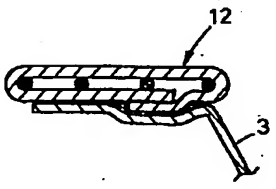

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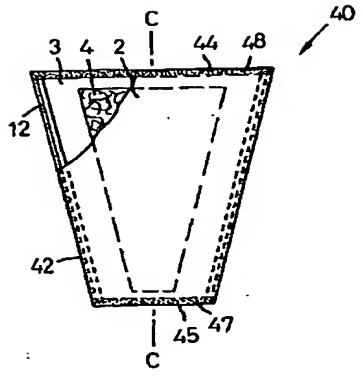

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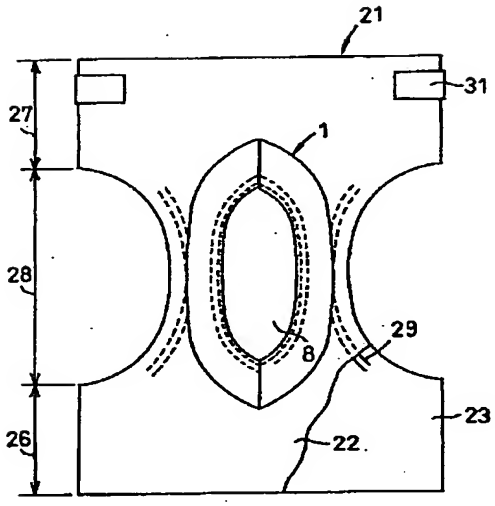

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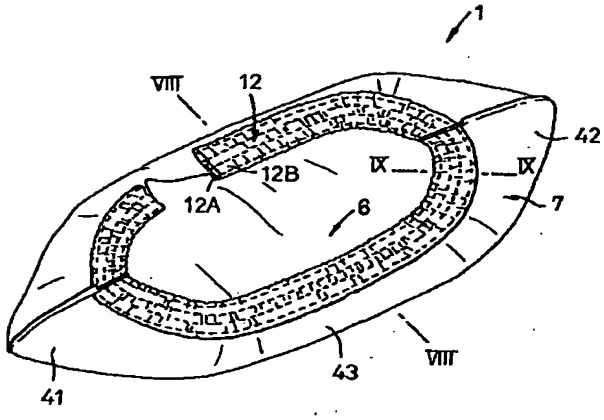

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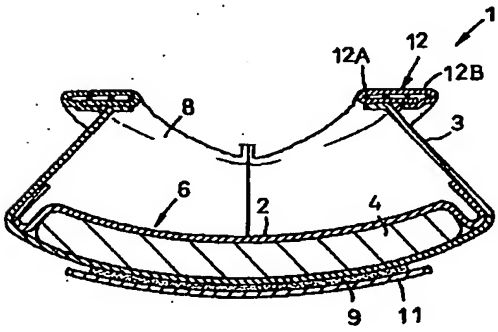

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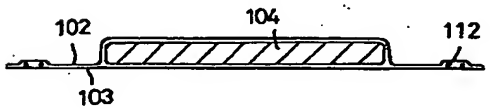
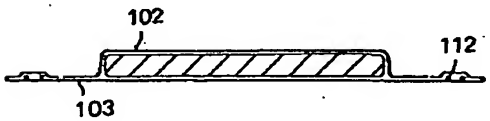
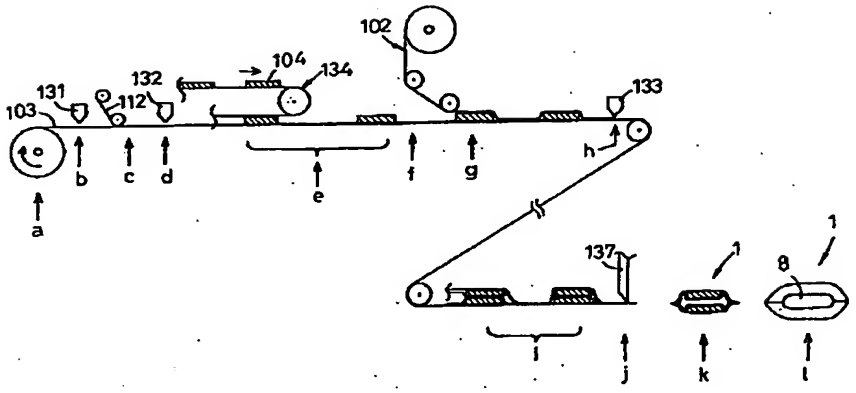


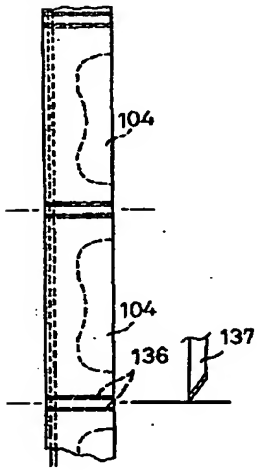
【図１３】



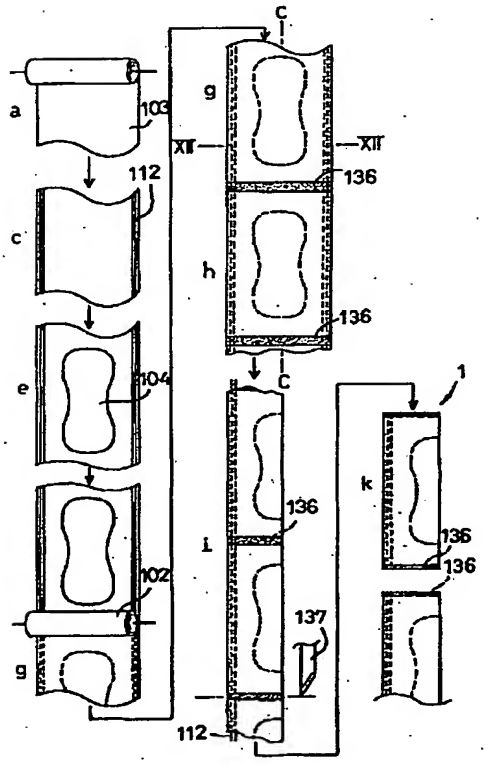
【図１０】



【図１４】



【図１１】



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